

Appl. No. 10/019,030  
Atty. Docket No. AA411M  
Amdt. dated June 24, 2003  
Reply to Office Action of December 24, 2002

### REMARKS

Claims 1 - 10 are pending in the present application. No additional claims fee is believed to be due.

Claim 1 has further been amended to further define the present invention wherein the matter of Claim 4 has been incorporated into Claim 1.

The specification has been amended on page 1, first paragraph, in order to contain a specific reference to the prior application to which the present application is claiming benefit of priority. In addition, this reference regarding priority will provide the clarity the Examiner has requested with regard to the instant application and priority benefits.

The specification has further been amended on pages 14 and 15, in order to further define the variables a and b. With regard to variables x and y for formula II and variables m and n for formula IV, Applicants believe that one of skill in the art would readily understand the disclosure in the specification with regard to the variable. On page 14 of the specification, x and y are indicated as integers which depend on the molecular weight, the average molecular weight being approximately between 5,000 and 10,000. On page 15 of the specification, formula IV is disclosed as an especially preferred amino-substituted siloxane corresponding to formula III is the polymer known as "trimethylsilylamodimethicone" of formula IV. On page 15, for formula IV, n and m are selected depending on the molecular weight of the compound desired. As formula IV is a preferred embodiment of formula III, on page 14, with regard to formula III, the specification discloses that the sum n+m is a number from 1 to 2,000, preferably from 50 to 150, n being able to denote a number from 0 to 1,999 and preferably from 49 to 149 and m being able to denote an integer from 1 to 2,000 and preferably from 1 to 10. Applicants believe that such disclosure would be readily understood by one of skill in the art.

It is believed these changes do not involve any introduction of new matter. Consequently, entry of these changes is believed to be in order and is respectfully requested.

### Rejection Under 35 USC 112, Second Paragraph

The Office Action States that Claims 1, 5 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. Accordingly, Claims 5 has been amended to delete the term "general" as it was viewed as indefinite and unclear. Likewise, Claim 8 has been amended to delete the term "about" as it is viewed as indefinite.

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Further, with regard to Claim 5, the Examiner has raised an objection for lack of antecedent basis and a further objection that there is no connection between the formula and the acid. Applicants kindly point out that the cationic conditioning agent is first recited in Claim 1 (c), and for which Claim 5 is dependent from. Applicants would like to direct the Examiner's attention to the specification at page 18, paragraph 4, wherein the cationic conditioning agent is defined as being selected from the group consisting of cationic surfactants, cationic polymers, and mixtures thereof. The amidoamine defined in Claim 5, is a cationic surfactant, and thus a cationic conditioning agent. Further disclosure in the specification, regarding cationic surfactants, is found in the specification at page 10, second paragraph, wherein it is disclosed that the amidoamines herein are preferably partially quarternized with the acids selected from the group consisting of L-glutamic acid, lactic acid, hydrochloric acid, malic acid, succinic acid, acetic acid, fumaric acid, L-glutamic acid hydrochloride, tartaric acid, and mixtures thereof. Therefore, there is direct support found in the specification for Claim 5 and the connection between having a composition containing an amidoamine in combination with an acid.

The Examiner has raised an objection to Claim 8 having the recitation "having from about 1 to about 30 carbons" for the definition of alkyl, aryl and alkyl aryl as being indefinite, as the carbon atoms have a fixed chain length. Applicants have amended Claim 8 by deleting the term "about".

The Examiner further raised an objection to Claim 8 with regard to the simplest alkyl has 2 carbon atoms and aryl has starting from 6 carbon atoms and has suggested the language "alkyl with 1 to 30 carbon atoms". However, Applicants would like to kindly point out that there is a possibility that such a suggested phrase could be interpreted by one of skill in the art as having no aromatic moiety. As such, Applicants would prefer not to leave this phrase up to interpretation. Therefore, Applicants have further amended Claim 8 to read as follows: "C<sub>1</sub>-C<sub>30</sub> alkyl, C<sub>2</sub>-C<sub>30</sub> alkenyl alkyl, C<sub>6</sub>-C<sub>30</sub> aryl, and C<sub>6</sub>-C<sub>30</sub> alkyl aryl". Applicants believe that this recitation will be readily understood by one of skill in the art.

#### Invention Synopsis

The present invention discloses a hair conditioning composition comprising by weight from about 0.1% to about 20% of a cationic silicone emulsion comprising by weight of the cationic silicone emulsion from about 1% to about 20% of a cationic surfactant; and an emulsifiable amount of a silicone compound having a particle size of less than about 50 microns, wherein the silicone compound comprises a mechanically emulsified polydimethylsiloxane; from

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about 0.1% to about 15% of a high melting point fatty compound having a melting point of 25°C or higher; from about 0.1% to about 10% of a cationic conditioning agent; and an aqueous carrier.

**35 U.S.C. § 102(b)**

Claims 1-4 and 10 are rejected under 35 U.S.C. § 102(b) as being anticipated by WO 98/19655 ('655). Applicants respectfully traverse this rejection. '655 discloses hair conditioning compositions comprising a silicone emulsion comprising a silicon polymer selected from the group consisting of a polyalkyl siloxane having a molecular weight of at least 20,000, a polyaryl siloxane having a molecular weight of at least 20,000, an amino-substituted siloxane having a molecular weight of at least 5,000, a silicon resin having a molecular weight of at least 5,000 and mixtures thereof, an anionic surfactant, a compatibilizing surfactant, and a cationic surfactant wherein the silicone polymer is dispersed as a particle having an average size of not more than 450nm; cationic surfactant, and water, wherein the total amount by mole of cationic surfactants in the composition is greater than the total amount by mole of anionic surfactants in the composition.

As now amended, the present invention is directed towards a composition comprising a cationic silicone emulsion, fatty alcohol and cationic surfactants wherein the silicone compound comprises a mechanically emulsified polydimethylsiloxane. By this combination, the composition can provide a volume up benefit to the hair. '655 Discloses conditioner compositions comprising cationic silicone emulsion made by emulsion polymerization, fatty alcohols and cationic surfactants. Therefore, the present invention requires the use of a silicone compound comprises a mechanically emulsified polydimethyl siloxane wherein '655 requires the use of a cationic silicone emulsion made by emulsion polymerization. The present invention has surprisingly found that the use of mechanical emulsification does not require the use of anionic surfactants, while emulsion polymerization, as taught by '655, requires the use of anionic surfactants. All of the examples in the present invention use cationic silicone emulsions made by mechanical emulsification.

One of the advantages of using mechanical emulsification, as taught by the present invention, is that as the present composition contains a cationic surfactant, the absence of an anionic surfactant in the silicone emulsion, results in minimizing any interaction with conditioner chassis system. The interaction of anionic surfactants in silicone emulsion, as taught in '655, can result in a change in composition rheology and decrease the spreadability of the composition on the hair. Therefore, '655 does not disclose the present invention. Further, as '655 does not recognize the relationship between volume up hair benefits, composition spreadability, and mechanical emulsification versus emulsion polymerization, there is no motivation to select the present invention's mechanical emulsification and anionic free surfactant system over emulsion polymerization, as taught by '655.

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Clearly, '655 neither discloses nor makes obvious this component of the present invention.

Rejection Under 35 USC 103(a) Over WO '655 and U.S. Patent 6,468,515

Claims 6-9 have been rejected under 35 USC 103(a) as being unpatentable over the combination of WO '655 and U.S. Patent 6,468,515 ('515). Applicants respectfully traverse this rejection for two reasons. First, '655 and '515 et al does not establish a *prima facie* case of obviousness because it does not teach or suggest all of Applicants' claim limitations. Second, even if a *prima facie* case was established, the obviousness argument is overcome by Applicants' showing of unexpected results. Therefore, Applicants' content that the claimed invention is unobvious and that the rejection should be withdrawn.

'655 and '515 do not teach or suggest all of Applicants' claim limitations and therefore, does not establish a *prima facie* case of obviousness (see MPEP 2143.03). Specifically, '655 and '515a et al does not teach the claim limitation wherein the silicone compound comprises a mechanically emulsified polydimethylsiloxane. '515 discloses a hair conditioning composition comprising a high molecular weight ester oil being water insoluble, having a high molecular weight of at least about 800 and in liquid form at 25C. Specifically, '655 and '515 requires the use of a cationic silicone emulsion made by emulsion polymerization. On the other hand, as now amended, the present invention is directed towards a composition comprising a cationic silicone emulsion, fatty alcohol and cationic surfactants wherein the silicone compound comprises a mechanically emulsified polydimethylsiloxane. By this combination, the composition can provide a volume up benefit to the hair. Clearly, neither '655 nor '515 disclose nor makes obvious this component of the present invention.

Further, as '655 and '515 does not recognize the relationship between volume up hair benefits, composition spreadability, and mechanical emulsification versus emulsion polymerization, and the absence of anionic surfactants. Again, there is no motivation to select mechanical emulsification. Therefore, the '655 and '515 neither disclose nor make obvious the present invention.

Conclusion

In light of the above remarks, it is requested that the Examiner reconsider and withdraw the rejection under 35 U.S.C. 112, 102(b) and 103(a). Early and favorable action in the case is respectfully requested.

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Applicants have made an earnest effort to place their application in proper form and to distinguish the invention as now claimed from the applied references. In view of the foregoing, Applicants respectfully request reconsideration of this application, entry of the amendments presented herein, and allowance of Claims 1-10.

Respectfully submitted,  
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June 24, 2003  
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